



CLAIMS

1. Method to kill breast cancer cells or other carcinoma cells expressing the same target antigens in a cell population comprising nucleated cells harvested from peripheral blood, or CD-34⁺ cells selected from the above nucleated cells, or other immature/early progenitor cells from blood containing multipotent stem cells, **characterized in** that the cell population is exposed to a combination of two immunotoxins, wherein each immunotoxin is composed of a conjugate between an antibody and a cell toxin, fragments of antibodies and toxin, or recombinantly produced antibodies, toxins, immunotoxins or fragments thereof, wherein the antibodies are directed to epitopes on the antigen EGP2 expressed by the gene GA733 and to epitopes on the antigen expressed by the genes MUC1, MUC2 or MUC3, respectively or a combination of these, and the toxin is Pseudomonas exotoxin A.

2. Method according to claim 1, **characterized in** that the used antibodies are MOC31 and an antibody directed to the antigens encoded by the genes MUC1, MUC2, MUC3 or a combination of these.

3. Method according to claims 1, 2, **characterized in** that the used antibodies are MOC31 and BM7, or fragments thereof.

4. Method according to claims 1, 2, **characterized in** that the used antibodies are MOC31 and BM2 or 12H12, or fragments thereof.

5. Method according to claims 1, 2, **characterized in** that the used antibodies are MOC31 and 595A6, or fragments thereof.

6. Method according to claim 1, **characterized in** that the specific immunotoxins are administered in vivo.

7. Method according to claim 6, **characterized in** that the immunotoxins are administered systemically, especially in case of malignant spread to tissues such as bone and bone marrow.

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8. Method according to claim 6,
characterized in that the immunotoxins are administered directly into the tumor or
in the pleural and abdominal cavities.

5 9. Immunotoxins to kill cells according to the method in claim 1,
characterized in that it contains two immunotoxins directed to antigens present on
malignant cells.

10 10. Immunotoxins according to claim 9,
characterized in that the antibodies are selected among MOC31, and BM7, 595,
BM2, 12H12 or combinations of these or fragments thereof and the toxin is native
or recombinant Pseudomonas exotoxin A, or fragments thereof.

15 11. Use of the immunotoxins according to claim 9, to produce a therapeutic agent
against cancer.

12 12. Kit to perform the method according to claim 1,
characterized in that it contains a preparation of two immunotoxins in a
pharmaceutically acceptable formulation.

Rule 1.126
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